

Installation Guide

for Informix Dynamic Server.2000

on Windows NT

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Informix Corporation
4100 Bohannon Drive
Menlo Park, CA 94025-1032

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Documentation Team: Kathy Eckardt, Jennifer Leland, Ann McKillop, Tom Noronha

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In This Guide

This guide contains instructions on how to install Informix Dynamic Server 2000 on Windows NT computers. In addition, it shows how to use the installation program to configure and initialize the database server.

The installation program that this guide describes installs not only the files for the database server itself but all the utilities that are associated with the database server.

For more information, see [Getting Started with Informix Dynamic Server 2000](#).

Important: If you are performing an upgrade, see the “[Informix Migration Guide](#)” before you perform the installation steps in this manual.



Types of Users

This guide is written for database administrators (DBAs) who are installing Informix database server products. This guide assumes that you are familiar with the operating procedures of your computer and with your operating system. For information about your operating system, see your Windows NT documentation.

Preparing to Install Informix Products

You can install Informix products only as licensed by Informix. You must not transfer software from one computer to another or to another portion of your network without re-registration and the written consent of Informix.

If you encounter difficulties when you install these products, refer to “[Solving Installation Problems](#)” on page 53. If you continue to encounter problems, contact Informix Technical Support. In North America, call toll-free (800) 274-8184 or send a facsimile to (913) 599-8590. Outside North America, contact your distributor or the nearest Informix subsidiary.

Installation Requirements

You must be a member of the Windows NT Administrators group to install the database server. Before installation, verify that your computer meets the following minimum requirements:

- Windows NT, Version 4.0, with Service Pack 3 or later
- TCP/IP
- Sum of RAM and swap file must be at least 64 megabytes
- Destination drive with a Windows NT file system (NTFS)
- 16 megabytes of RAM
- 140 megabytes of disk space (including a minimum of 30 megabytes for the root dbspace and 20 megabytes for the additional dbspace)

If installation files already exist on the system, the installation program determines at runtime the amount of disk space required.

Product Materials

You can receive your product materials from an Electronic Software Download (ESD) vendor or directly from Informix.

Loading Product Files from an ESD Vendor

For information on how to load ESD-vendor product files, see individual vendor documentation. Make a note of the serial number and activation key for your product. The Informix product-installation program requires that you supply these values when you install that product.

Loading Product Files from Informix

If you receive your product materials directly from Informix, these materials include a serial-number keycard, which shows the serial number and activation key, and electronic media, such as a compact disk. Both the serial-number keycard and the electronic media are necessary for installation. If you do not have the serial-number keycard or the proper media, contact your supplier or Informix sales representative.

Order of Installation

You must install the database server before you install other products. Install products in the following order:

1. Install Dynamic Server.
2. Install Informix tools.
Many Informix tools bundle Informix Connect. Be sure that you do not install an older Informix Connect from a tool application over a newer Informix Connect.
3. Install DataBlade modules.
Install DataBlade modules in order from the oldest to the newest versions. For information on how to install DataBlade modules, see the DataBlade module documentation.
4. Install client products.
Install Client SDK or Informix Connect. For information about installing Informix client products, see client installation documentation.

If you install more than one Informix product, complete all installation procedures for one product before you start to install the next product. Do not load the files from another Informix product onto your computer until you complete the current installation.

For information about how to migrate from one Informix database server to another, see the [Informix Migration Guide](#).

Preinstallation Considerations

Before you install the database server, address the following considerations:

- Check that you are a member of the Administrators group.
- Decide whether you want to install the database server on a domain or a local computer.
- Decide whether you want to uninstall an existing version of the database server before you perform a new install.
- Decide which database server you want to install.
- Decide whether to have multiple installations of the database server.

Administrators Group Membership

To execute the installation program, you must be a member of the Windows NT Administrators group for the local computer on which you plan to install the database server. For more information, see [“Local Installation” on page 4](#).

If you plan to install in a domain, you must be the local administrator of that domain. You can install in a domain with or without domain administrator privileges. If you have domain administrator privileges, see [“Domain Installation with Domain Administrator Privileges” on page 5](#). If you do not have domain administrator privileges, see [“Domain Installation Without Domain Administrator Privileges” on page 6](#).

The Windows NT **User Manager** program allows you to add members to the Administrators group. To access **User Manager**, choose **Start→Programs→Administrative Tools (Common)→User Manager**. Context-sensitive, on-line help provides detailed instructions on how to create groups and add users to groups.

Choosing Local or Domain Installation

Before you run the installation program, you must decide whether to perform a local installation or a domain installation.

Local Installation

If you do not plan to have workstations access the domain controller, install the database server on a local computer.

If you want to perform a local installation of the database server, log onto the local computer before you run the installation program. You must have local administrative privileges on the local computer to perform this step.

Domain Installation with Domain Administrator Privileges

To allow users access to the database server from workstations, install the database server in the domain. Users on other Windows NT computers can then access the database server if they belong to either the same domain or a trusted domain. For information on how you can provide increased database security, see [“Dividing Administrative Tasks” on page 14](#).

Domain installation is useful if you run the database server on several computers and have a central security mechanism. If several of your computers belong to a domain with a primary domain controller, perform a domain install on these computers.

To centralize authorization so that your database servers run on a domain, perform the following steps:

- Add your computer to the domain.
- Create the user **informix** in the domain controller.
- Make user **informix** a member of the Global Domain Admin group.
- Log in as **domain_name\informix** from individual computers to enable domain installation.
- Choose the **Domain install** option when prompted by the installation wizard when you run the installation program.

For more information on domains, see your operating-system documentation.

Domain Installation Without Domain Administrator Privileges

It is possible to perform a domain install when you do not have administrative privileges on the primary domain controller (PDC), but you must have administrative privileges on the local computer. If you have administrator privileges on this computer, take the following actions before you perform the installation of the database server:

1. Create all required users and groups, assign appropriate privileges, and insert the users into appropriate groups. Any user who has the required privileges to create users and groups in the domain can perform these steps.
2. Decide whether or not to enable role separation.
 - If you do not plan to enable role separation, create a domain user named **informix** and a domain group called **Informix-Admin**. Make user **informix** part of the group **Informix-Admin**. To perform these steps, choose **Start→Programs→Administrative Tools (Common)→User Manager→User→New User**.
 - If you plan to enable role separation, create additional groups and users and make them members of the corresponding groups in the **User Manager**. To perform these steps, choose **Start→Programs→Administrative Tools (Common)→User Manager→User→New User**.

The groups are Database Administrators, Auditing Administrators, Security Administrators and Database Users. The default group names are **Informix-Admin**, **ix_aao**, **ix_dbssso**, and **ixUsers**.

Create two users who are part of the **ix_aao** and **ix_dbssso** group respectively. The default user names are **AAO** and **DBSSO**. During installation, you have the option of selecting existing users and groups instead of creating new users and groups. However, user **informix** is required and must be a member of the **Informix-Admin** group and all users must be direct members of the group. You cannot include members in a group indirectly by including another group.

Finally, make users **AAO**, **DBSSO**, and **informix** members of the **ixUsers** group.

For more information on role separation, see [“Dividing Administrative Tasks” on page 14](#).

3. If you have local administrator privileges, perform the following actions on the local computer where installation will take place. If you do not have these privileges, ask your system administrator to perform these steps.

Use the information in the Policies menu of the **User Manager** to perform the following tasks:

- Choose **Start→Programs→Administrative Tools (Common)→User Manager→User→New User** to make the domain user **informix** a member of the administrators group on the local computer.
 - Choose **Start→Programs→Administrative Tools (Common)→User Manager→Policies→User Rights** to grant the following advanced privileges to user **informix**: “Logon as service,” “Run as part of OS,” “Increase quotas,” and “Replace a process level token.”
4. Log onto the computer as one of the domain users that you created previously, such as user **informix**.

Now run the installation program as “[Installing the Database Server](#)” on [page 8](#) describes. If you enable role separation, you do not have to specify the passwords for the **ix_aao** and **ix_dbso** user because you already created these users. The rest of the installation procedure remains the same.

Choosing Whether to Uninstall an Existing Version

If an existing version of the database server is already installed, decide whether to uninstall this version before you run the installation program. In some cases, it might be necessary to uninstall the existing version of the database server to make sure that no conflicts exist concerning directories, .dll files, registry entries, or Informix-related services.

To uninstall a previous version, see “[Uninstalling the Database Server](#)” on [page 31](#) before you run the installation program.

If you choose to install the database server over an existing installation, the installation program will display an upgrade or reinstall page after you start the program. For more information, see “[Upgrade and Reinstallation Pages](#)” on [page 9](#).

Informix recommends that you uninstall the previous version before you install a new version.

Specifying the Database Server to Install

You do not have to specify which database server you want to install. The software CD for each database server installation contains only the product files for that database server. The installation program checks your software CD to determine which database server to install.

Choosing Whether to Have Multiple Installations

The database server installation program allows you to install multiple versions of the database server in separate directories.

If you choose to install over an existing installation, Informix recommends that you install the new version in a different directory.

When you choose to perform multiple installations, each installation of the database server has its own program group on the **Programs** menu. For more information, see [“The Database Server Program Group” on page 24](#).

If you already have the database server installed in one program group and you want to install the database server in another program group, see [“Reinstallation Page” on page 10](#) and [“Multiple Installations” on page 13](#).

Installing the Database Server

This section describes the steps in the installation process. Read the instructions in this section before you install the database server. These instructions give you an overview of the entire installation process and guide you in selecting the appropriate options on the pages of the installation program.

Keep the following manuals nearby because they provide detailed discussions of specific installation and configuration options, such as role separation, the name of the database server, and the database server number:

- The [Trusted Facility Manual](#)
- The [Administrator's Guide](#)

Starting the Installation Program

If you purchased either the Informix Internet Foundation 2000 bundle or the Informix Dynamic Server.2000 bundle, use the installation program located in the top-level directory to install the database server. This installation program guides you through the installations for all the products in the bundle.

To start and run the installation program, enter the following command:

```
X:\setup.exe
```

In these commands, X is the drive or shared volume on which the software CD that you received from Informix is mounted, or X is the directory where the product files that you downloaded from an ESD vendor are stored.

If you received your product materials from an ESD vendor, find the **Setup** application icon (**setup.exe**) in the directory where you downloaded the product files. Click this icon to start the installation program

For more information, see the READ ME FIRST in your packaging materials.

Upgrade and Reinstallation Pages

If you are upgrading from a 7.2x or a 9.1x database server, the installer displays the Upgrade Page dialog box. Follow the instructions in [“Upgrade Page”](#) to continue the installation.

If you are upgrading from a 7.3 database server or you are reinstalling a 9.2 database server, the installer displays the Reinstallation Page dialog box. Follow the instructions in [“Reinstallation Page”](#) to continue the installation.



Upgrade Page

The installation program displays an upgrade page. To continue with the installation, select the **upgrade** option. To cancel the installation, click **Cancel**. If you select upgrade, the installation program skips most of the setup pages and uses existing information instead.

Important: *If you have a previous version of the database server installed, Informix recommends that you uninstall this version before you install the new version. To uninstall the previous version of the database server, follow the steps in [“Uninstalling the Database Server” on page 31](#).*

Reinstallation Page

The installation program displays the Installing Again dialog box. Choose the **Copy files but leave configuration alone** option in the Installing Again dialog box. The Reinstall dialog box appears and displays the directory where the database server is installed and presents the following choices:

- Install the database server using the existing configuration.
If you choose this option, the installation program uses the existing database server configurations and installs the new database server over the existing database server.
- Install the database server and reconfigure it in the same directory.
If you choose this option, the installation program removes all existing database server configuration information, installs the new database server over the existing database server, and displays new database server configuration screens.
- Install the database server in a different directory.
If you choose this option, the installation program does not delete the existing database server or change its configuration. Instead, the program installs the new database server into the directory that you specify and displays screens for configuring it.

The existing database server and the new database server have different program groups. Informix recommends that you install the new version in a different directory.

Main Page

The installation wizard guides you through the three major steps of the installation procedure. The main page of the installation wizard appears before you begin each major step. The step you perform next is highlighted in boldface type so that you know where you are in the program. At this point in the program, the first major step is highlighted: Select installation options and supply data.

The pages of the installation wizard contain buttons that enable you to navigate between pages. In most cases, you can click **Next** to advance to the following page or click **Back** to return to the previous page. To abort the process at any time and return to Windows NT, click **Cancel**.

On pages in which you are required to enter information, press TAB to move the cursor from one text box to another.

The installation program checks the information that you enter on program pages and displays an error message if the information is not valid. If you get an error, see [“Solving Installation Problems”](#) on page 53.



***Tip:** If the program page or message box you are viewing disappears and is replaced by a blank screen or a screen consisting of the Informix logo and a picture of a CD-ROM, hold down the **Alt** key and press the **Tab** key to restore the current program page or message box. You might have to perform this action several times.*

Selecting Installation Options

Step 1 of the installation wizard includes pages that prompt you to select installation options. The following sections describe these installation options.

Cluster Install Option

If you are running the installation program on a cluster, this page allows you to specify whether the database server is to be installed so that it can be failed over to the other node or whether the database server can run on only one node. The term *failover* means that if a failure occurs on one node of the cluster, the database server is restarted on the surviving node.

If you are not running the installation program on a cluster, the installation program does not display the page for the cluster install option.

For more information on how to install the database server on both nodes of a cluster in fail-safe mode, see [“Cluster Installation” on page 36](#).

Domain Install Option

You must indicate whether you want to perform a domain installation. For more information, see [“Choosing Local or Domain Installation” on page 4](#).

If you specify a cluster install in [“Cluster Install Option” on page 11](#), the installation program does not display the page for the domain install option. When you specify a cluster install, the installation program automatically performs a domain installation.

Establishing an Installation Directory

You must decide where you want the database server files to reside. The directory where the database server files reside is known as the installation directory.

The **Installation Directory** page allows you to specify an installation directory. You can choose to keep the default installation directory, type the name of a new installation directory in the **Installation Directory** text box, or click the browse button to select another directory as the installation directory. The destination drive must be formatted with NTFS.

The directory you specify in the **Installation Directory** text box can include spaces within the full pathname. For example, you can enter:

```
D:\Program Files\My Favorites\Informix Stuff
```

This page also displays the minimum disk space required for a database server installation.

Your selections on this page depend on whether you are performing a fresh install, an upgrade or reinstall, or multiple installations.

Fresh Installs

If you created the **INFORMIXDIR** directory, this directory is the default installation directory, and the name of this directory is displayed in the **Installation Directory** text box.

If you did not create the **INFORMIXDIR** directory, the default installation directory is a directory named **Informix** on the root of the first NTFS drive that the installation program finds on your system. The name of this directory is displayed in the **Installation Directory** text box.

If you do not want to use the default directory displayed in the **Installation Directory** text box, enter the name of the desired installation directory in this text box.

Upgrades and Reinstalls

If you have already installed the database server, the **Installation Directory** text box displays the directory where the database server is installed. If you plan to perform an upgrade or a reinstall in the same program group, select the directory displayed in the **Installation Directory** text box as the installation directory.

Multiple Installations

If you have already installed the database server, the **Installation Directory** text box displays the directory where the database server is installed. This installation of the database server has a corresponding **Informix Dynamic Server 2000 9.20** program group on the **Start→Programs** menu. If you want to install the database server in a second program group, specify an installation directory for the second program group that is different from the installation directory for the first program group. The result is that you will have two separate installations of the database server, and each installation will have its own program group.

For more information on program groups, see [“The Database Server Program Group” on page 24](#).

Specifying the Installation Method

You must specify the installation method. Your choices are as follows:

- **Typical installation**
A typical installation uses the most disk space and memory.
A typical installation is the default value. Informix recommends the typical installation for most database servers.
- **Minimal installation**
A minimal installation conserves the most disk space and memory.
- **Custom installation**
A custom installation allows you to perform advanced installation steps.



Important: If you select typical or minimal installation, the installation program does not display some of the screens that the following pages of this guide show. If you want to use the entire set of screens in the installation program, select the Custom Installation option.

Dividing Administrative Tasks

The **Role Separation** page allows you to enable role separation. If you enable role separation, you provide increased database security because you can split administrative tasks into mutually exclusive roles. If you enable role separation, you gain control over who accesses the database server.

However, when you enable role separation, only users who are designated as members of the **IXUSERS** group can access the database. Each new user must be a member of the **IXUSERS** group.



Important: You cannot turn off role separation once you chose this option. To remove role separation, you must uninstall the database server and re-install without role separation.

If you do not enable role separation, the **Informix-Admin** group performs all administrative tasks.

The following table describes the administrative role categories that make up role separation.

| Role Category | Role Definition |
|-------------------------|---|
| Auditing | The person who audits the records of specific types of database activities If someone attempts to circumvent or corrupt the security mechanism of the database, these actions can be traced. |
| Security Administration | The person who maintains the security of the database server Functions of this role include audit adjustment and changing security characteristics of storage objects. |
| General Administration | The person responsible for general administrative tasks, such as archiving and restoring data, monitoring use and performance, and tuning the system |

If you want to enable role separation, check the box on the **Role Separation** page. If you do not want to enable role separation, click **Next**.

If you do not enable role separation, continue with [“Specifying the Informix Account Password” on page 17](#).

For detailed information about the role separation feature, see the [Trusted Facility Manual](#).

Specifying Database Server Administrative Groups

Using the roles that the previous section describes, you can specify the names of administrative groups that access the database server. The following table describes the groups and gives their default names.

| Name | Group Type |
|--------------------------------|------------------------------|
| IXDBSA (INFORMIX-ADMIN) | General administration tasks |
| IXDBSSO | Security-related tasks |
| IXAAO | Audit administration tasks |
| IXUSERS | End-user tasks |

You can choose to keep the default group names, type new group names, or click **Browse** to select other group names from the Select Group dialog box.

Establishing the Auditing Administrator

When you enable role separation, the database server uses a special account for auditing. You can choose to keep the default user name, type a new user name, or click **Browse** to select another user name from the Select User dialog box. You then type a password in the **Password** and **Confirm Password** text boxes.

Establishing a Security Administrator

When you enable role separation, the database server uses a special account for security administration. You can choose to keep the default user name, type a new user name, or click **Browse** to select another user name from the Select User dialog box. You then type a password in the **Password** and **Confirm Password** text boxes.

Specifying the Informix Account Password

The installation program now displays a **System Administration** page that asks you to specify the password for user **informix**. The database server service that the installation program creates runs under this account. If the account does not exist, the installation program creates the account.

Copying Files

When you click **Next** on the **System Administration** page, the main page of the wizard reappears with step 2 highlighted. This step copies the installation files. When you click **Next**, the installation program installs the files on your system in the location and in the manner that you specified. The program also displays messages that give the pathname of the source files and the target files.



Important: *The copy of the installation files might take several minutes. If you want to cancel the copy of the installation files and return to Windows NT, click **Cancel**. You will then have to re-run the installation program from the beginning.*

Configuring the Database Server

After the installation program installs the files on your system, the main page of the wizard reappears with step 3 highlighted. This step configures the database server. If you click **Finish**, the installation program starts the Server Instance Manager to configure an instance of the database server. The pages in this part of the program allow you to set specific configuration parameters.

You can cancel the installation program at this time and use the Server Instance Manager to configure a database server at a later time.

If you are reinstalling the database server and you select the option to reinstall using the existing configuration as “[Upgrade and Reinstallation Pages](#)” on page 9 describes, the installation program does not display the screens for configuring or initializing the database server. Instead you receive a message that indicates that the database server was installed successfully. To complete the installation, see “[Completing the Installation](#)” on page 23.

For more information, Informix recommends that you review the discussion of configuration tasks in the [Administrator's Guide for Informix Dynamic Server 2000](#).

Specifying the Resource Group

The installation program displays the Resource Group page only if the user specified a cluster installation. This page specifies the resource group that the database server instance is to become part of.

Specifying the Database Server Number

The **Server Number** page enables you to specify a number that uniquely identifies a database server if many instances of the database server are installed. If only one database server is present, you can set this number to 0. To determine how many instances of the database server are installed, run the Server Instance Manager program. For more information on this program, see [“Server Instance Manager” on page 44](#) and the [Administrator’s Guide](#).

Naming the Database Server

On the **Name the Dynamic Server** page, you are required to specify a name for the database server that you are configuring. You specify a default value in most cases. When a client application connects to a database server, the client application must specify its database server name.

***Tip:** Database server names must begin with a letter and can contain only letters, numbers, and the underscore character.*



Specifying Protocol Parameters

For the TCP/IP network protocol, specify the service name and port number. If only one server instance exists on the computer, the installation program provides default values. Informix recommends that you use these default values. For subsequent instances, you must provide separate values.

Specifying the Name of the Root Dbspace

Use the **Storage Name** page to specify a name for the root dbspace. A dbspace is a logical collection of storage areas to which databases and tables are assigned. The root dbspace is the initial dbspace that the database server creates as well as the default dbspace location for any database created with the CREATE DATABASE statement.

The root dbspace contains reserved pages and internal tables that describe and track all other storage components. For more information on dbspaces and the root dbspace, see the [Administrator's Guide](#).

Specifying the Storage Location for the Root Dbspace

Use the **Primary Data Location** and **Mirror Location** list boxes in the **Storage Location** page to specify a primary and mirrored data-storage location for the root dbspace, as follows:

- **Primary Data Location**

By default, the Primary Data Location is the current drive. The amount of available disk space is shown in this list box. To change the default, use the pull-down menu.

- **Mirror Location**

If a second NTFS drive (with at least 10 megabytes available) is found, this text box shows the default drive letter and available disk space. If a second local drive formatted with NTFS cannot be found, the Mirror Location displays *None*.

In addition, the Storage Location page shows the maximum and suggested disk-space size for the **Primary Data Location** and **Mirror Location**. The **Current Size** text box shows the current suggested disk-space size. To change the current disk-space size value, use the text box arrows.

Specifying the Name of the Default Sbspace

Use the **Default Sbspace Storage Name** page to specify a name for the default sbspace. An sbspace is a logical storage area that the database server uses to store smart large objects (that is, CLOB and BLOB data). The default sbspace is the sbspace where the database server stores a smart large object if you do not specify an sbspace name when you create the smart large object. The database server also uses the default sbspace to store user-defined statistics. For more information about sbspaces, see the [Administrator's Guide](#).

Specifying the Storage Location for the Sbspace

Use the **Primary Data Location (NTFS only)** and **Mirror Location (NTFS only)** list boxes in the **Default Sbspace Storage Location** page to specify a primary and a mirrored data-storage location for the default sbspace, and to select a new drive. The mirrored location serves as the backup area if the primary storage device fails. [Figure 1](#) shows the **Default Sbspace Storage Location** page.

Figure 1
The Default Sbspace Storage Location Page

By default, the Primary Data Location of the sbspace is the current drive. The amount of available disk space is shown here.

If a second NTFS drive (with at least 10 megabytes available) is found, this text box shows the default drive letter and available disk space. If a second local drive formatted with NTFS cannot be found, the Mirror Location displays None.

The Maximum Size is close to the smaller of the available disk spaces for the Primary Data Location and the Mirror Location.

The size of the sbspace should approximate the size of the most frequently occurring smart large object that the sbspace holds. The default is 1 page.

The Suggested Size is 50 megabytes.

The Current Size defaults to 50, but you can change it to as little as 5 megabytes.

Specifying Tape Devices

The installation program does not prompt you to enter information about the tape devices you will use. Instead, this task is part of setting up Informix Storage Manager (ISM).

ISM is the default storage manager for the database server installation program. The installation program automatically copies the ISM executable files to the computer. These executable files are installed on the same drive as the database server installation.

For information about setting up ISM, see the [*Informix Storage Manager Administrator's Guide*](#).

Specifying the Computer for Shared Server Definition

The installation program displays a **System Administration** page that asks you to specify the computer to use for shared server definition for your database server and administrative tools. This computer stores the **sqlhosts** registry. You can specify one of the following options:

- The local computer on which you are installing the database server. This value is the default value.
- Another computer in the network that serves as a central, shared repository of **sqlhosts** information for multiple database servers in the network. If you specify another computer on the network, you must set the **INFORMIXSQLHOSTS** environment variable on your local computer to the name of the computer that stores the **sqlhosts** information.

Accept the default value or enter a new value in the **Computer** box and click **Finish**. The installation program now installs services on the computer.

Choosing Whether to Initialize the Database Server

When you click **Finish** on the **System Administration** page, the installation program configures the database server and displays a message box that indicates that the database server has been configured. If you configured a new instance of the database server, the message box asks you whether the database server is to be initialized. Click **Yes** to initialize the database server and the root dbspace or click **No** if you do not want them initialized. If you click **No**, a message box appears warning that you must manually start the database server and create the storage later if you skip initialization now. Click **Yes** to skip initialization. For more information on manual initialization, see [“Starting the Database Server” on page 28](#).



Important: *The initialization of the database server might take several minutes.*

Receiving the Successful Installation Message

After you select **Yes** or **No** in the initialization message box described above, you receive a message that indicates that the database server was installed successfully. You can receive this message at either of the following points in the program:

- If you choose to initialize the database server, this message appears after initialization of the database server is complete.
- If you choose not to initialize the database server, this message appears after you click **No** in the initialization message box and **Yes** in the confirmation message box.

The successful installation message also advises you to read the release notes for the latest product information after all products are installed. To read the release notes, click **Start→Programs→Informix Dynamic Server 2000 9.20→Release Notes**. For more information on release notes, see [“The Database Server Program Group” on page 24](#).

Completing the Installation

After you click **OK** in the message box that indicates the database server was installed successfully, you receive another message that instructs you to log out and log back in after all products have been installed to update the members of the **Informix-Admin** group. This step enables you to run the Informix administration tools.

After you click **OK** in the preceding message box, you receive another message that instructs you to restart your computer in order to complete the installation. Now reboot your system and log back in.

The Database Server as a Windows NT Service

After you complete the installation steps, the installation program automatically performs the following actions to make the database server ready to run on Windows NT:

- Installs the database server as a Windows NT service.
- Creates a user account called **informix** and an administrative group called **Informix-Admin**.

If you enabled role separation when you installed the database server, you can change the name of the **Informix-Admin** group.

- Automatically assigns the **informix** user account, which the database server runs under, to the **Informix-Admin** group and to the **Administrators** group.
- Grants the following advanced privileges to the **informix** user account: "Logon as service," "Run as part of OS," "Increase quotas," and "Replace a process level token."
- Creates a program group that includes items for the database server instance, the uninstall program, the Server Instance Manager, and other items. To access this program group, click **Start→Programs→Informix Dynamic Server 2000 9.20**.

If you performed a domain installation without domain administrator privileges, the installation program does not perform most of the preceding steps because you performed them manually as "[Domain Installation Without Domain Administrator Privileges](#)" on [page 6](#) describes.

After you install the database server, you can start it manually as [“Starting the Database Server” on page 28](#) describes. You can also set up the database server to start whenever Windows NT is launched, as [“Starting the Database Server Automatically” on page 30](#) describes. After you start the database server, you can stop it as [“Stopping the Database Server” on page 30](#) describes.

The Database Server Program Group

After you successfully install the database server, you can select various items related to the database server from the program group that the installation program creates. Click **Start→Programs→Informix Dynamic Server 2000 9.20** to access the items in this program group.

Items in One Program Group

The following table describes the items that you can select from the program group that the installation program creates.

| Menu Item | Description |
|-------------------------|--|
| Documentation Notes | This item describes features that are not covered in database server manuals or that have been modified since publication. Read the contents of this file before you use the database server. |
| Informix Error Messages | This item provides a complete list of Informix error messages and their corrective actions. |
| Release Notes | This item describes feature differences from earlier versions of Informix products and how these differences might affect current products. This file also contains information about any known problems and their workarounds. Read the contents of this file before you use the database server. |

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| Menu Item | Description |
|-------------------------|---|
| Server Instance Manager | This item configures new server instances. You can also use this item to remove configured server instances and the databases associated with those instances. For more information about the Server Instance Manager, see “Server Instance Manager” on page 44 . |
| Uninstall Server | This item allows you to remove the database server from your system. For more information on the uninstallation program, see “Uninstalling the Database Server” on page 31 . |
| <i>server-name</i> | One <i>server-name</i> menu item exists for each database server instance that is configured. Each item opens an MS-DOS command-line window that enables you to run DB-Access and certain command-line utilities such as onstat , oncheck , and onspace . However, you cannot run the oninit utility from this window. For more information about DB-Access, see the DB-Access User's Manual . For more information about command-line utilities, see the Administrator's Guide . |

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If you have only one installation of the database server, you have only one program group. If you want to configure new server instances in this program group, select the Server Instance Manager item from the program group menu. After you configure a new server instance, another *server-name* menu item is added to the program group menu.

If you want to delete a server instance in this program group, you again select the Server Instance Manager item from the program group menu. After you delete a server instance, the *server-name* menu item for that instance is removed from the program group menu.

If you want to uninstall the database server altogether, select the Uninstall Server item from the program group menu. After you uninstall the database server, the entire program group is removed from the **Start→Programs** menu.

Multiple Program Groups

If you have multiple installations of the database server, you have one program group for each installation on the **Start→Programs** menu. Each program group corresponds to the installation directory in which the product files for a particular database server reside.

You can have two or more installations of the same database server version, or you can have two or more installations of different versions of the database server. For example, both of the following multiple-installation scenarios are valid:

- You have two or more separate installations of Informix Dynamic Server 2000. The name of the program group for the first installation is **Informix Dynamic Server 2000 9.20**. The name of the program group for the second installation is **1. Informix Dynamic Server 2000 9.20**. The name of the program group for the third installation, if any, is **2. Informix Dynamic Server 2000 9.20**.
- You have one installation of Informix Dynamic Server 2000, one installation of Dynamic Server, Version 7.3, and one installation of INFORMIX-**Universal Server**, Version 9.1x. The name of the program group for Dynamic Server, Version 9.2, is **Informix Dynamic Server 2000 9.20**. The name of the program group for Dynamic Server, Version 7.3, is **Informix**. The name of the program group for INFORMIX-**Universal Server**, Version 9.1x, is **INFORMIX-Universal Server**.

Using the Server Instance Manager with Multiple Installations

Even when you have multiple separate installations of the database server, the Server Instance Manager program in any program group always displays all the database server instances on your computer. You can delete any database server instance on your computer from the Server Instance Manager program in any program group.

However, when you create a new database server instance in a particular program group, the new instance is installed in the program group from which you ran the Server Instance Manager program. The Server Instance Manager program always creates a new database server instance with a unique database server name and unique port number across all installations.

For more information on how to use the Server Instance Manager program, see [“Server Instance Manager” on page 44](#).

Reinstallation Considerations for Multiple Installations

If you want to reinstall the database server in the same program group, be sure to choose the installation directory where the database server is already installed on the **Installation Directory** page. For more information on how to use this page, see [“Establishing an Installation Directory” on page 12.](#)

Conversion Considerations for Multiple Installations

If you are converting from **INFORMIX-Universal Server**, Version 9.1x, to the current version, the installation program changes the program group name on the **Start→Programs** menu from **INFORMIX-Universal Server** to **Dynamic Server 9.20**. If single or multiple installations of **Dynamic Server**, Version 9.2, are already installed on your computer, the installation program prefixes the name of the converted program group with the first free number.

For example, if two separate installations of **Dynamic Server**, Version 9.2, already exist on your computer and you convert an installation of **INFORMIX-Universal Server**, Version 9.1x, to Version 9.2, the name for the converted program group is **2. Informix Dynamic Server 2000 9.20**.

The same considerations apply if you convert your database server from **Informix Dynamic Server**, Version 7.3, to the current version. The installation program changes the name of the converted program group to **Informix Dynamic Server 2000 9.20** and prefixes this name with a number if one or more installations of the current database server version already exist.

For more information on how to convert an earlier version of the database server to the current version, see [“Upgrade and Reinstallation Pages” on page 9.](#)

Uninstall Considerations for Multiple Installations

If you want to uninstall a particular installation of the database server, you must use the **Uninstall Server** program in the program group for that database server. This step uninstalls the database server associated with that program group but leaves other installations of the database server intact.

For more information, see [“Uninstalling the Database Server” on page 31.](#)

Starting the Database Server

This section shows you:

- two different ways to start the database server after you initialize it.
- two different ways to initialize and start the database server if you did not initialize it during the installation process.
- how to set up the database server to start automatically when Windows NT is launched.

To start the database server, you must be a member of the **Informix-Admin** group. For detailed information about how to start the database server, see the [Administrator's Guide](#).

Starting the Database Server from the Control Panel

If you initialized the database server during the installation process, you can perform the following steps to start the database server as a Windows NT service. The database server automatically starts the Message Server service to write to the Windows NT event log.

1. Choose **Start→Control Panel**.
2. Double-click **Services**.
3. Select **Informix Dynamic Server** (*server_name*) from the **Service** list box.
4. Click **Start**.

Starting the Database Server from the Command Line

If you initialized the database server during the installation process, you can start the database server from the command-line window with the following command:

```
starts server_name
```

Warning: You will get an error message if you try to start the database server by executing the **oninit** utility from the command-line window. The use of **oninit** in the command-line window is not supported.



Initializing and Starting the Database Server from the Control Panel

If you did not initialize the database server during the installation process, perform the following steps to initialize and start the database server from the Control Panel:

1. Access the **Control Panel**.
2. Double-click the **Services** icon.
3. Select **Informix Dynamic Server** (*server_name*) from the **Service** list box.
4. In the **Startup Parameters** text box, enter `-iy`.
When you specify these parameters, the database server creates and initializes the root dbspace.
5. Click **Start**.

Initializing and Starting the Database Server from the Command Line

If you did not initialize the database server during the installation process, enter the following command to initialize and start the database server from the command-line window:

```
starts server_name -iy
```



Warning: You will get an error message if you try to start the database server by executing the **oninit -iy** utility from the command-line window. The use of **oninit -iy** in the command-line window is not supported.

Starting the Database Server Automatically

To set up the database server to start automatically when Windows NT is launched, perform the following steps:

1. Access the **Control Panel**.
2. Double-click the **Services** icon.
3. Select Dynamic Server (*server_name*) from **Service** list box.
4. Click **Startup** and click **Automatic** in the Service dialog box.
5. Click **OK**.
6. Verify that the **Startup Parameters** text box is empty.
7. Click **Start**.

Stopping the Database Server

This section summarizes the steps required to stop the database server. Use one of the following methods to stop the database server:

- The Windows NT Control Panel
- The **onmode** utility in the command-line window

To stop the database server, you must be a member of the **Informix-Admin** group. For detailed information about how to stop the database server, see the [Administrator's Guide](#).

To stop the database server from the Windows NT control panel

1. Access the **Control Panel**.
2. Double-click the **Services** icon to display the **Service** list box.
3. Select **Informix Dynamic Server** (*server_name*) from the **Service** list box.
4. Click **Stop**.

To stop the database server from the command line with the **onmode** utility

1. Click **Start→Programs→Informix Dynamic Server 2000 9.20** to display the program group for the database server.
2. Click the icon for the database server instance to display the command-line window.
3. At the command-line prompt, type:

```
onmode -ky
```

Uninstalling the Database Server

This section explains how to remove the database server from your system with the **Uninstall** program.

Considerations Before Uninstalling the Database Server

Keep the following considerations in mind before you run the uninstall program:

- The uninstall program removes files only if you uninstall the previous version *before* you attempt to reinstall or upgrade.
- The uninstall program does not remove the message server.

The message server is a shared component and different versions of the database server could be using the same message server. If you do not require the message server, stop it with the **Services Control Panel**. After you stop the message server, use **deletes.exe** in the **informix** directory to remove the service **deletes msgserv**. After you remove this service, you can perform the uninstall.

- Be sure to stop all other Informix-related services before you run the uninstall program.
To stop these services, click **Start→Settings→Control Panel→Services** and then select the Informix-related services and stop them.
- Be sure to remove any Informix client programs before you uninstall the database server.
To uninstall client programs, click **Start→Settings→Control Panel→Add/Remove Programs** and then select any client programs and remove them.

Running the Uninstall Program

To launch the uninstall program for the database server, click **Start→Programs→Informix Dynamic Server 2000 9.20→Uninstall Server**. The uninstall program guides you through the process of uninstalling the database server.

Initial Screen

The initial screen of the uninstall program displays the following uninstall options.

- Remove only database server executables and support files
- Remove all database server files and all database information
- Remove database server files and revert database and registry to the older format from which you originally upgraded to the current version

Remove Only Database Server Executables and Support Files

If you want to remove the program files but preserve the configuration of the database server, select the option to remove only database server executables and support files. This option leaves the registry, groups, and configuration files as they are. It also preserves your databases. Select this option if you plan to perform a reinstall or an upgrade. This option is the default.

If you select this option, you should shut down the SNMP service if it is running. Also make sure that the OnSNMP process that runs from the %INFORMIXDIR%\bin directory has terminated. This process remains for a while after the database server has terminated and the SNMP service is stopped, depending on the linger time set in the registry.

Remove All Database Server Files and All Database Information

If you want to remove not only the program files but also the configuration information for the database server, select the option to remove all database server files and all database information.

Use this option when you do not want the database server at all. Keep in mind that you will lose all your databases when you select this option.

If you just want to remove a specific database server instance, you can run the Server Instance Manager and select a specific instance to remove.

Remove Database Server Files and Revert to Older Format

If you upgraded from an earlier version of the database server, you can choose to revert to this earlier version. To revert to an earlier version of the database server, select the option to remove database server files and revert to the older format. You cannot select this option if you did not upgrade from an earlier version of the database server to the current version.

This option is similar to the option to remove only database server executables and support files in that it only removes the program files and support files but leaves the databases intact. In addition, some changes made while upgrading are undone.

When you choose to revert to an earlier version, only the configuration information is reverted. Before you run the uninstall program, you must use the -b option of the **onmode** utility to change the database format. For more information, see the [Informix Migration Guide](#).

When you select the reversion option, remember to shut down the SNMP service and wait for the OnSNMP process to terminate, as “[Remove Only Database Server Executables and Support Files](#)” on page 32 describes.

The database server service that is created after reversion contains an incorrect password. To change this password, use the **Services** Control Panel and select the **Startup** button.

The uninstall program reverts only one instance of the database server. If multiple instances of the database server are configured, the program asks the user to remove all other instances of this version of the database server, except for one.

Messages Displayed for a Complete Uninstall

If you select the option to remove all database server files and all database information on the initial screen, the uninstall program sends several messages while it is uninstalling the database server. You must make a choice in each message box.

Confirmation Message

After you select the option to remove all database server files and all database information on the initial screen, you get a message that indicates that you cannot undo the effects of this operation. The message box asks you whether you want to proceed. Click **Yes** to proceed or **No** to cancel the uninstall operation. If you click **Yes**, the uninstall program begins to uninstall the database server files.

Informix Storage Manager (ISM) Message

The uninstall program sends a message asking whether you want to remove ISM servers. The message warns you that this step would remove catalog information required for restore operations and that you might not be able to restore database servers later. The message suggests that you might want to choose no if other Informix database servers are running. Click **Yes** to remove ISM servers. Click **No** to preserve ISM servers. For more information about ISM, see the [*Informix Storage Manager Administrator's Guide*](#).

SNMP Message

The uninstall program sends a message asking whether you want to remove SNMP extension agents. Click **Yes** or **No** in the message box. For more information, see the [Informix SNMP Subagent Guide](#).

Successful Uninstall Message

After the uninstall program carries out the type of uninstall you specified (removal of program files only or removal of all database information), it sends a message that indicates that the database server has been uninstalled. Click **OK**.

Uninstalling the Database Server with the Control Panel

If you want to use Windows NT facilities instead of the Informix uninstall program to remove the database server from your system, click **Start→Settings→Control Panel→Add/Remove Programs**. Then select any database server programs and remove them.

Reinstalling the Database Server

If an earlier version of the database server is already installed, the installation program proceeds only if you select an upgrade. If you want a fresh install of the database server, you must first uninstall the previous version completely.

When you re-install the database server over a previous installation of the same database server version, stop the Server Agent service before you start the re-installation. Then follow the steps that “[Installing the Database Server](#)” on [page 8](#) shows.

Remote Installation

If you want to install the database server on a remote computer, use the Microsoft SMS utility. For example, if you are logged onto a computer in Los Angeles, you can use the SMS utility to install the database server on a computer in New York City.

Cluster Installation

The database server supports the Microsoft Cluster Server (MSCS) feature, which enables high availability on Windows NT. The MSCS feature allows you to cluster two Windows NT computers, referred to in the MSCS feature as *nodes*, as redundant components. When a failure occurs on one node in the cluster, Windows NT restarts the failed applications (such as the database server) on the surviving node in the pair.

MSCS includes an administration tool called the Cluster Administrator. The Cluster Administrator enables you to designate a cluster and define resources, resource ownership, and dependencies on other resources. A *resource* is a hardware component, such as a shared disk, or a software application, such as the database server, that is shared between the two nodes in a cluster.

The Cluster Administrator also enables you to define groups that specify resource dependencies, so that the Microsoft Resource Manager can move groups of dependent resources to the surviving node in the event of failure. The Resource Manager is a program that invokes specific start, restart, stop, and monitoring functions for a resource.

You can install the database server on one node of a cluster or on both nodes (in a fail-safe mode). Installation on one node of a cluster is like the regular installation on a stand-alone computer. Installation on both nodes of a cluster is different from a regular installation on a stand-alone computer. This section explains how to install the database server on both nodes of a cluster and shows how to test whether the database server has been installed on both nodes correctly.

Basic Procedure for a Cluster Installation

If you want to install the database server on multiple nodes of a cluster, perform the following steps. The subsections that follow explain these steps in detail.

- Start the Cluster Administrator.
- Create an **Informix** group in the Cluster Administrator.
- Add or create dependent resources for the Informix group.
- Create new resources.
- Install the database server on both nodes.
- Create Informix resource.
- Set resource property.
- Initialize the database server through the command line.
- Create additional dbspaces.

Starting the Cluster Administrator

To start the Cluster Administrator program, click **Start→Programs→Administrative Tools (Common)** and then click **Cluster Administrator**.

When you start the Cluster Administrator, connections left open when you closed the previous session are restored. If no connections were left open, the Cluster Administrator prompts you to enter a cluster name, a node, or an IP address before it displays any information.

To open a connection to a cluster, use the network name or IP address of the cluster or one of its nodes. If the Cluster Administrator cannot find the cluster by its name, enter the name of an active node in the cluster.

Creating an Informix Group in the Cluster Administrator

To create an **Informix** group, perform the following steps:

1. On the **File** menu, point to **New** and click **Group**.
2. In the **Name** field, type a name for the new group (for example, Informix Database).
3. The name that you give the group is only for administrative purposes. It is not the same as the Network Name, which is the UNC resource that identifies the group in the browse list.
4. In the **Description** field, type any comments you want and then click **Next**.
5. The group description appears with the group name when the group is listed in the right pane of the Cluster Administrator.
6. Under **All Nodes in the Cluster**, click the nodes you want to be the preferred owners for the group and click **Add**.
7. Click **Move Up** and **Move Down** to change the priority of a selected owner.
8. When the list of preferred owners is complete and prioritized, click **Finish**.

All resources within the new group will fail over together. To have the group fail back to a node, specify that node as the preferred owner. Groups can be balanced between two nodes to maximize the performance of the cluster. However, you can choose not to have a preferred owner if the location of the group does not greatly affect performance.

Defining Dependent Resources for the Informix Group

Through examples, define in advance what are the dependent resources. List typical dependent resources that will always be present, such as disk drives that host dbspaces, IP addresses, and so on. This definition process includes the following steps:

1. Define the shared drives for the group.

The drives where the root dbspace and other dbspaces will be stored must be made part of the Informix group. Similarly, the drive on which Informix executable files are installed should also be made a member of the Informix group.

2. Define a network name resource for the **Informix** group.

The network name resource is the name of the *virtual host* that will be used in the **sqlhosts** registry. When client applications connect to the database server, they will communicate with the network name resource *virtual host* rather than with any physical computer. For cluster configurations, virtual host names are used in the **sqlhosts** registry. As opposed to physical host names, the virtual host names persist even after failure of a node, because upon failure they simply move over to the surviving node during failover.

To create a Network Name resource, follow the procedure described in [“Creating New Resources” on page 40](#).

3. Define an IP address resource for the **Informix** group.

The IP address resource that you create is the IP address to which the network name resource will be bound. Because this IP address migrates from one node to another during failover, it is also called a floating IP address.

To create an IP address resource, follow the procedure that [“Creating New Resources” on page 40](#) describes.

Creating New Resources

Perform the following steps to create new resources:

1. Select the Informix Resource Group. In the left or right pane of the Cluster Administrator, click the newly created **Informix** group that you want the resource to belong to.
2. Choose **New Resource**. On the **File** menu, point to **New** and then click **Resource**.
3. Set up the new resource. In the **New Resource** dialog box, perform the following actions:
 - In the **Name** field, type a unique name for the resource.
 - In the **Description** field, type a description for the resource. This step is optional.
 - In the **Resource Type** field, enter the appropriate type: for example, IP address, Network Name, Informix Dynamic Server 2000, and so on.
 - In the **Group** field, enter the name of the newly created Informix group to which the resource will belong.
 - If you want to have this resource monitored separately from other resources, select **Run this resource** in a separate Resource Monitor check box.
4. Click **Next**.
5. Set up the owner of the resource. Add or remove possible owners of the resource and then click **Next**.
6. Add dependencies. Under **Available resources**, click a resource and then click **Add**.

For example, the Network Name resource depends on the IP address resource, and the Informix Dynamic Server 2000 resource depends on the Network Name resource and shared disk resource.
7. Repeat the preceding step for any other resource dependencies and then click **Next**.
8. Enter resource-specific information and then click **Finish**.

Before you add a resource to your cluster, you must verify that the following conditions are true:

- The resource type is either one of the basic types that MSCS recognizes or is a type that was created by using an appropriate **.dll** file that the resource manufacturer provided.
- A group already exists within the cluster to which your resource will belong.
- All dependent resources have been created.
A separate Resource Monitor is recommended for a resource whose **.dll** file is likely to conflict with other resource **.dll** files. Separate Resource Monitors are also recommended for resources that will have to be investigated and corrected.

Installing the Database Server on Both Nodes

Perform the following steps to install the database server on both nodes of the cluster:

1. Install the database server on each node by following the procedure that [“Installing the Database Server” on page 8](#) shows.
2. Create dbspaces on the shared drives that were added to the Informix group.
3. Specify the Network Name resource name as the name of the virtual host to which database server clients will connect.
4. Do not initialize the database server.

When the installation program prompts you to initialize or not initialize the database server, do not initialize the database server. For more information, see [“Choosing Whether to Initialize the Database Server” on page 22](#).

Creating Informix Resource

The installation of the database server in a cluster automatically sets up a new resource type definition, IFXDB920, for Informix resources. After you install the database server on both nodes of the cluster, you can use the Cluster Administrator to create new resources of type IFXDB920, as [“Creating New Resources” on page 40](#) describes.

Use the Informix database server name (the value of the DBSERVERNAME configuration parameter) as the name of the resource that you will create in this step. If you want to deploy multiple instances of the database server, each instance will require its own resource group and its own IFXDB920 resource within that group. IFXDB920 resources should always have the same name as the Informix database server name for that instance.

Setting Resource Property

Set Resource Property ServerInstance after you create the IFXDB920 resource. Use the following command in the command shell `<windir>\Cluster` directory to set the property parameter (that is, the ServerInstance Name):

```
<windir>\Cluster\CLUSTER RES IFXDB920_resource_name /PRIV  
ServerInstance= informixserver
```

In this command, the informix server value that you assign to the Server Instance parameter has a form like **ol_njcluster12**. The **ol_njcluster12** value is also the resource name and is the same value as the DBSERVERNAME configuration parameter.

Initializing the Database Server Through the Command Line

After you install the database server on both nodes of the cluster and set up resource dependencies in the Informix resource group, initialize the database server from the Service Control panel with the -iy parameter, as [“Initializing and Starting the Database Server from the Control Panel” on page 29](#) describes. Keep in mind that MSCS provides no failover support during the initialization of the database server.

Creating Additional Dbspaces

If you plan to use additional dbspaces, create them on the disk drives that you have already put in the Informix resource group. Keep in mind that MSCS provides no failover support during creation of additional dbspaces.

Basic Testing of the Cluster Installation

The following procedure shows you how to test whether you installed the database server on both nodes of a cluster correctly:

1. Using the Cluster Administrator, bring the database server resource online on the first node of the cluster.

Check if the database server is online.

2. Using the Cluster Administrator, move the complete Informix group to the second node of the cluster.

The Cluster Administrator gracefully shuts down the server instance. In the Cluster Administrator status display, the resource changes to off-line mode. All the resources in the Informix group change to online mode on the second node. The database server instance should start gracefully on the second node and show an online status.

3. Test failover by stopping the cluster service on the node where Informix resources are currently running.

This action is an example of an ungraceful switchover. All the resources should shift to the other node and should change to online mode. The Informix database server resource will also change to online mode on the other node. To test this condition, check the status of the database server.

4. Test node failover by a sudden node failure.

Turn off the computer where the database server is currently running. All the resources should shift to the other node and should change to online mode. The Informix database server resource also should change to online mode on the other node. To test this condition, check the status of the database server.

5. Add more than one database server resource instance to the Informix group or create different Informix groups for each database server resource instance.

Follow this step and the next step if you plan to have multiple instances of the database server.

6. Test all the database resource instances by repeating the first four steps for each database server resource instance and each Informix group.

Multiple Residency

The multiple residency feature allows multiple instances of the database server to run on the same computer at the same time. The installation program copies the product files to the directory that the user selected and configures one instance of the database server. Use the Server Instance Manager to create and manage further database server instances.

The OnSNMP product also supports multiple residency. The installation program copies the product files for OnSNMP to the directory that the user selected.

Server Instance Manager

Informix provides the Server Instance Manager program to help you manage multiple instances of the database server. This graphical user interface (GUI) program provides the ability to add, delete, or modify database server instances. To launch the Server Instance Manager, click **Start→Programs→Informix Dynamic Server 2000 9.20→Server Instance Manager**.

You must have administrative privileges on the database server in order to use the Server Instance Manager program. However, local administrator privileges are enough, even if the database server was installed for domain use.

When the Server Instance Manager program is invoked, it displays a list of all database server instances that reside on the computer. Users can use buttons to create a new instance or delete one of the existing instances.

If you select the delete option, the currently selected instance in the list of instances is deleted. However, this deletion only takes place if the Server Instance Manager knows how to delete the instance for the version. If the Server Instance Manager knows about the version, all information related to the instance is deleted. This information includes the registry keys, services, associated registry entries (for example, for OnSNMP), dbspaces, and the **onconfig** file.

The Server Instance Manager program does not display a wizard for deleting an instance. Before deleting an instance, the Server Instance Manager stops the service if it is currently running. None of the other services are stopped for removal of an instance.

The Server Instance Manager displays a wizard if you choose to create a new instance. This wizard collects all the database server configuration parameters and configures the database server. The information that you must supply for the new instance includes the database server number. This number uniquely identifies the instance among the database server instances. The information you must supply also includes the network parameter. In the case of the first database server instance, the server number and network parameter can be defaulted.

For more information on using the Server Instance Manager, see the [Administrator's Guide](#).

OnSNMP for Multiple Residency

Informix does not provide a separate user interface for installing OnSNMP. OnSNMP is installed in the background. The executable files for OnSNMP are copied even if the OnSNMP service is not running when the database server is installed. If the OnSNMP service was not configured on the computer at the time of the installation, a separate program, named **inssnmp.exe**, is provided for configuring OnSNMP to operate with the database server.

The uninstall operation for OnSNMP does not require any user interaction with the program. The OnSNMP product is automatically uninstalled when the database server is uninstalled.

For more information on OnSNMP, see the [Informix SNMP Subagent Guide](#). For more information on multiple residency, see the [Administrator's Guide](#).

Silent Installation

This section shows how to perform a silent installation of the database server. A silent installation saves time because it requires no user interaction with the installation program.

In order to run a silent installation, go to the top directory in the database server product folder, <iif2000> or <ids2000>. Click **silent.ini**. This file contains installation parameters as well as comments that show the user how to modify these parameters.

To use the **silent.ini** file for a silent install, you must first copy this file manually to a TEMP directory. Then you must modify this file so that it has the correct parameters for the silent installation, such as the serial number, the activation key, and the pathname of the installation directory.

After you modify the **silent.ini** file, start the silent installation by entering the following command under the server product folder:

```
setup.exe -s silent_ini_pathname -l silent_log_pathname
```

In this command, *silent_ini_pathname* stands for the full pathname to the **silent.ini** file, and *silent_log_pathname* stands for the full pathname to the **silent.log** file. If **silent.ini** and **silent.log** reside in C:\TEMP, enter the following command to start the silent installation of the database server:

```
setup.exe -s C:\TEMP\silent.ini -l C:\TEMP\silent.log
```

Because the silent installation cannot send error messages to the user interactively, it uses the **silent.log** file as an installation log. If the silent installation fails for any reason, the failure is recorded in the **silent.log** file.

Parameters Required in the silent.ini File

The following tables show the parameters for which values must be present in the **silent.ini** file. These parameters are grouped into three sections: a BUNDLE_COMMON and PRODUCT_IDS section, a server install section, and a server instance section.

BUNDLE_COMMON and PRODUCT_IDS Parameters

BUNDLE_COMMON and PRODUCT_IDS parameters are not specific to the database server installation, but they are necessary for a silent install of the database server.

The following table lists the minimum set of BUNDLE_COMMON and PRODUCT_IDS parameters that must be present in the **silent.ini** file and explains the values for each parameter.

| Parameter | Description |
|--------------------|--|
| Serial_No | The serial number value for an installation. This field is blank in the silent.ini file. Users must supply the serial number on the command line when they run the installation program in silent mode. |
| Key | The activation key value for an installation. This field is blank in the silent.ini file. Users must supply the activation key value on the command line when they run the installation program in silent mode. |
| Install_Dir | The directory where you plan to install the product files |
| ACTUAL_INSTALL_DIR | The directory where you plan to install the product files should be the same as the Install_Dir. |

Server Install Parameters

The values in the Server Install section of the **silent.ini** file specify how the database server is to be installed. The following minimum set of parameters in this section is necessary for copying files over in a database server install.

| Parameter | Description |
|-------------------|---|
| Typical | If you specify a value of 1, the database server is installed as a typical install. If you do not specify any value, the default value is 1. You cannot specify both the Typical and Minimal parameters as having a value of 1. |
| Minimal | If you specify a value of 1, the program performs a minimal install. You cannot specify both the Typical and Minimal parameters as having a value of 1. |
| Shutdown_Services | If you specify a value of 1, the computer shuts down the services that must be shut down for the install to proceed. These services include any services that the computer must upgrade, such as the database server and other services like OnSNMP. If you specify any value other than 1, the computer does not shut down services. However, if you specify a value other than 1, and some of the services are using the files that must be upgraded, the install might not complete correctly. |
| Upgrade | If you specify a value of 1, and the installation program detects an existing version, the existing version is upgraded. If you specify a value of 0, and the installation program detects an existing version, the database server is not upgraded. Because co-existence with previous versions is not supported in this release, an unspecified value implies a value of 0. |
| Reinstall | The Reinstall parameter is similar to the Upgrade parameter. However, you can install the same version again. |
| Domain_Install | If you specify a value of 1, the user groups are created in a domain. If you do not specify a value of 1, all of the user accounts and groups that are created reside in the local computer. However, enabling domain install requires that the person who performs the install have domain administrator privileges. This parameter is ignored if the person who performs the install cannot install in a domain. |

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| Parameter | Description |
|-----------------|--|
| Cluster_Install | You must specify this parameter if the computer on which the installation program runs is part of a Windows NT cluster. If you specify a value of 1, you enable installation on a cluster in a fail-safe mode. This parameter is ignored on non-clustered computers. A cluster install requires a domain install as well. |
| Role_Separation | If you specify a value of 1, role separation is enabled. If you specify any other value than 1, role separation is not enabled. If you are installing Informix Dynamic Server, Workgroup Edition, the installation program ignores this parameter and always uses a value of 0. |
| IXDBSA_Group | This parameter is set to the name of the IXDBSA group and is to be used for checking if the user belongs to the IXDBSA group. The group is created in the domain if the user selected domain install. Otherwise the group is local. The group is used only if role separation is enabled. Unless you require a specific group name, it is easier to use the default value. |
| IXDBSSO_Group | This parameter is set to the name of the IXDBSSO group and is to be used for checking if the user belongs to the IXDBSSO group. The group is created in the domain if the user selected domain install. Otherwise the group is local. The group is used only if role separation is enabled. Unless you require a specific group name, it is easier to use the default value. |
| IXAAO_Group | This parameter is set to the name of the IXAAO group and is to be used for checking if the user belongs to the IXAAO group. The group is created in the domain if the user selected domain install. Otherwise the group is local. The group is used only if role separation is enabled. Unless you require a specific group name, it is easier to use the default value. |

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| Parameter | Description |
|--------------------|---|
| IXUSERS_Group | This parameter is set to the name of the IXUSERS group and is to be used for checking if the user belongs to the IXUSERS group. The group is created in the domain if the user selected domain install. Otherwise the group is local. The group is used only if role separation is enabled. Unless you require a specific group name, it is easier to use the default value. |
| DBSSO_User | This parameter specifies the name of the Security Administrator. |
| DBSSO_Passwd | This parameter specifies the password of the Security Administrator. |
| AAO_User | This parameter specifies the name of the Auditing Administrator. |
| AAO_Passwd | This parameter specifies the password of the Auditing Administrator. |
| Account_Passwd | This parameter specifies the password for the informix user. |
| Configure_Instance | This parameter specifies whether a new instance of the database server is to be created. If you specify a value of 0, an instance is not configured in the case of a fresh install. If you are performing a reinstall, this parameter determines whether the existing configuration information is used, or whether a new instance of the database server is to be configured after deleting the existing instance. |
| Create_Icons | This parameter specifies whether icons must be created for the installed programs. If you specify a value of 0, you disable icon creation. |

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Server Instance Parameters

The Server Instance section of the silent file specifies parameters required to configure a particular instance of the database server. The installation program uses these parameters only in the case of a fresh install. If the install is an upgrade or you are reinstalling without reconfiguring, the installation program uses all the existing information. The following minimum set of parameters in this section is necessary for configuring a particular instance in a database server install.

| Parameter | Description |
|------------------|--|
| DBSERVERNAME | This parameter specifies the name of the database server. This value can be defaulted. However, the default name might not be acceptable to the user in all cases. If you want to assign a specific name, it is better to provide a name here. The database server name cannot be changed after it is installed. The default name has the form <code>ol_computer-name</code> . |
| SERVERNUM | This parameter sets the corresponding parameter in the onconfig file. The onconfig file contains the configuration parameters for the database server. The server number must be unique across all instances of the database server that is configured on the computer. You can default this parameter only for the first instance that you are configuring. You should make the value as small as possible. |
| SQLHOSTS | This parameter specifies the computer where the sqlhosts registry is located. The default is the computer where the installation takes place. |
| Storage_Name | This parameter specifies the name of the additional dbspace that is created. By default, this name is the same as the database server name in the DBSERVERNAME parameter. |
| Primary_Location | This parameter specifies the drive on which the root dbspace and the additional dbspace are created. This parameter can be defaulted. In that case, the dbspace is created on the same drive as the install directory. |

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| Parameter | Description |
|--------------------|---|
| Mirror_Location | This parameter specifies the drive where the mirror dbspaces are created, if mirroring is enabled. This parameter can be defaulted. If the value is just a dash (-), mirroring is not enabled. |
| Storage_Size | This parameter specifies the size of the additional dbspace (in megabytes). If you do not specify a value, a default value is used. |
| Initialize_Server | This parameter specifies whether the database server is to be initialized after its creation. If you specify a value of 1, the program attempts to initialize the database server. Otherwise you must perform the initialization manually. If you do not specify a value, the default is 1. |
| Service_Start_Auto | This parameter specifies how the database server is to be started. If you specify a value of 1, the database server is set up to start automatically on reboot. If you do not specify a value of 1, you must start the database server manually. |
| Server_Proto | This parameter specifies the network protocol parameters for the database server. The protocol field names the protocol to be used. Normally, you use the olsoctp protocol. The service name field specifies the name of the TCP/IP service that will be used to access the database server. The port number field specifies the TCP port number to be used for the service name. You can default this parameter only when no other instance of the database server is configured. |

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Solving Installation Problems

This section presents a list of common installation problems and shows how to recover from each problem.

- **Problem.** If you enter an invalid database server name, you receive the following message:

The database server name you entered is not valid. Please note the following limitations: a database server name cannot exceed 128 characters; it can only contain letters, numbers, and underscores; and it must begin with a letter.

Solution. Enter a different name and note the limitations stated in the message.

- **Problem.** If the database server cannot be installed on the specified drive, you receive the following message:

The specified drive is not formatted with NTFS. Please enter a new path.

Solution. Select a drive that is formatted with NTFS.

- **Problem.** If you specify an invalid pathname, you receive the following message:

The supplied path is not valid. Please enter a new path.

Solution. Enter a different path.

- **Problem.** If the specified drive does not have enough disk space for the installation of the database server, you receive the following message:

There is not enough disk space on the destination disk drive *drive_letter*. It has *number KBytes* free while the product requires *number KBytes*. Clear up some space or try another destination drive.

Solution. Either specify a different drive or delete unnecessary directories and files from the original drive before you resume the installation process.

- **Problem.** If you have insufficient virtual memory for the installation, you receive the following message:

This installation of Dynamic Server requires *number MB* of free page file space. After you install this product, increase your page file size to properly use your virtual memory with this product.

Solution. For information about how to increase the size of your page file, refer to your Windows NT documentation.

- **Problem.** If you have insufficient RAM for the installation, you receive the following message:

This installation of Dynamic Server requires *number MB* of RAM. More memory must be available before you can install Dynamic Server.

Solution. Close all other open applications. If you still receive this message, check that your system has at least 16 megabytes of RAM.

- **Problem.** If your operating system is not the correct version, you receive the following message:

This product requires version 4.0 or greater of the Windows NT operating system. You must update your operating system before installation.

Solution. This product requires Windows NT, Version 4.0, or later. Update your operating system if this error is displayed.

- **Problem.** If you do not have the correct privileges to run the install program, you receive the following message:

You do not appear to be an administrator. In order to run this program, you must belong to the Administrators group on *local computer*.

Solution. If you are not a member of the Administrators group on the local computer, this error is displayed. Use the administrator account to log on or contact your system administrator to add your user account to the Administrators group.

- **Problem.** If your password entries do not match each other, you receive the following message:

Your password entries do not match. Please verify that your password matches in the Password and Confirm Password text boxes.

Solution. The passwords that you entered in the **Password** text box and the **Confirm** text box do not match. Re-enter the passwords in both text boxes.

- **Problem.** If you enter an invalid password, you receive the following message:

Your password is not valid. Please verify and re-enter your password.

Solution. When the user specifies a password, the installation program verifies the password. If the password is incorrect, this message is displayed. Re-enter the password.

- **Problem.** If you installed a 7.x database server and you are upgrading to a 9.2 database server, you may have leftover 7.x information after you uninstall the 9.2 database server.

Solution. After you uninstall the database server, you must take some additional steps to ensure that you have cleared all information about the database server from your computer.

Warning: Make sure that you do not remove registry entries on which other Informix products are dependent.



By performing the following steps, you can avoid any potential conflicts concerning directories, .dll files, registry entries, or Informix-related services when you perform a fresh install of the database server:

1. Remove any remaining Informix directories.
2. Remove all log directories and log files.
3. Remove any Informix-related files from the TEMP and TMP directories.
4. Set any remaining Informix-related services to Manual. Click **Start→Settings→Control Panel→Services**.
5. Reboot your computer.
6. Log onto your computer as Administrator.

7. Remove the user **informix**. Click **Start→Programs→Administrative Tools (Common)→User Manager**.
8. Edit the registry to clear miscellaneous entries and any remaining Informix-related services that did not disappear from the **Services** control panel. First look for and delete any instances of **informix** and **ISM**. Next remove the actual services. The specific path to the services should be:

`HKEY_LOCAL_MACHINE\SYSTEM\ControlSet00x\Services`

9. Check the **Services** control panel after you delete the entries in the preceding step. If all Informix-related services are disabled, you have successfully cleared all information about the database server from your computer.
10. Reboot your computer.

You can also use the Microsoft Registry Editor utility **regedit** to remove registry entries.

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